

## REMARKS

Claim 4 has been cancelled. Claims 1-2, 5, 7-11 and 45-46 have been amended. Claims 12-44 have been withdrawn. Claims 1-2, 5, 7-11 and 45-46 remain for consideration. No new matter has been added.

The objections and rejections shall be taken up in the order presented in the Official Action.

**4-5.** Claims 1-2, 4-5, 7-11 and 45-46 currently stand rejected for allegedly being indefinite for failing to point out and distinctly claim the subject matter deemed to be the present invention.

Claims 1 and 45 have been amended to remove the alleged indefinite language.

**6.** Claim 7 currently stands objected to for informalities.

Claim 7 has been amended.

**8-9.** Claims 1, 2, 4, 7-11 and 45-46 currently stand rejected for allegedly being anticipated by the subject matter disclosed in U.S. Patent 6,215,894 to Zeleny (hereinafter "Zeleny").

### Claim 1

Amended claim 1 recites two carrier media for analyzing one or more analytes. The two carrier media include:

"each of the carrier media having a plurality of defined regions, where each of the defined regions has one of a plurality of different biological or chemicals substances applied and the arrangement of the plurality of defined regions on each of the carrier media is different; and

each of the carrier media having a uniquely associated code that indicates which one of the substances is applied in which one of the defined regions, where the substances are disposed differently in the defined regions on the two carrier media, where the code is from the group that comprises a bar code, a numeric code, an alphanumeric code, and an arrangement of the plurality of defined regions on each of

the carrier media.” (emphasis added; cl. 1).

The Official Action contends that “Zeleny discloses a carrier medium (i.e. 10, fig. 1) for analyzing an analyte, comprising: a plurality of defined regions (i.e. 12 and 14, fig. 1), where each of the defined regions has one of a plurality of different substances (i.e. column 2, line 66 to column 3, line 7); and a code (i.e. 16, 18, fig. 1; column 2, lines 13-33) that indicates which one of the substances is applied in which one of the defined regions, where the substances are disposed differently in the defined regions on two different carrier media (i.e. column 3, lines 1-7), where the code (i.e. 16, 18, fig. 1) is from the group that comprises a bar code, a numeric code, an alphanumeric code, and an arrangement of the plurality of defined regions on the carrier medium.” (emphasis added; Official Action, pg. 4).

Zeleny fails to anticipate amended claim 1 because Zeleny fails to disclose the feature of amended claim 1 of “*where the substances are disposed differently in the defined regions on the two carrier media*”. As noted above, the Official Action contends that Zeleny in column 3, lines 1-7 discloses this feature. (Official Action, pg. 4). Zeleny, in column 3, lines 1-7, discloses “*each of the array regions involves an experiment comprising an array of tests each of which involves a different combination of reagents. The tests are performed by depositing in drops of reagents in locations depicted as dots. The regions 12 and 14 comprise different experiments, in which case the tests in region 12 will be different from those in region 14.*” This disclosure teaches that the two array regions 12, 14 (FIG. 1) located on the microarray biochip 10 have different experiments or tests conducted as between the two regions 12, 14. As such, to carry out these two different experiments, Zeleny teaches that the two array regions 12, 14 have different combinations of reagents. That is, the two array regions 12, 14 **on a single biochip 10** have different combinations of reagents to effectuate

different tests between these regions 12, 14. This disclosure in Zeleny does not teach or suggest that two biochips 10 can have the array regions 12, 14 be formed with different combinations of reagents as between the two biochips 10, as in the present claimed invention. In fact, there is no disclosure or suggestion whatsoever in Zeleny, including in the cited section of column 3, lines 1-7, that any differences exist in the array regions 12, 14 as between two or more biochips 10. It is an improper reading and expansion of the disclosure in Zeleny to contend that differences exist in the array regions 12, 14 as between two biochips 10.

A 35 U.S.C. §102 rejection requires a single prior art reference that discloses each feature of the claimed invention. Zeleny is incapable of anticipating the subject matter of amended claim 1 since it fails to disclose the feature of amended claim 1 of “*where the substances are disposed differently in the defined regions on the two carrier media*”. Therefore, it is respectfully submitted that the anticipation rejection of amended claim 1 is moot and should be removed, and that amended claim 1 is in condition for allowance.

#### **Claim 45**

Since claim 45 stands rejected for the same reasons as claim 1, and since claim 45 has been amended similarly to amended claim 1, the arguments above with respect to the patentability of amended claim 1 apply equally well to amended claim 45. As a result, it is respectfully submitted that the anticipation rejection of amended claim 45 is moot and should be removed, and that amended claim 45 is in condition for allowance.

10. Claims 1, 2, 4-5, 7-11 and 45-46 currently stand rejected for allegedly being anticipated by the subject matter disclosed in U.S. Published Application 2003/0177380 to Woods (hereinafter “Woods”).

### Claim 1

The Official Action contends that “*Woods discloses a carrier medium (i.e. 112 and 110, fig.3) for analyzing an analyte, comprising: a plurality of defined regions (i.e. 116, fig. 3), where each of the defined regions has one of a plurality of different substances (i.e. bioloymers, e.g. in the form of polynucleotides, [0075]); and a code (i.e. 8, fig. 1A) that indicates which one of the substances is applied in which one of the defined regions, where the substances are disposed differently in the defined regions on two different carrier media (i.e. [0074]), where the code is from the group that comprises a bar code, a numeric code, an alphanumeric code, and an arrangement of the plurality of defined regions on the carrier medium.*” (emphasis added; Official Action, pg. 5).

Woods fails to anticipate amended claim 1 because Woods fails to disclose the feature of amended claim 1 of “*where the substances are disposed differently in the defined regions on the two carrier media*”. As noted above, the Official Action contends that Woods in paragraph 0074 discloses this feature. (Official Action, pg. 5). Woods, in paragraph 0074, discloses that “*referring first to FIGS. 3-5, typically biopolymeric arrays of the present invention use a contiguous planar substrate 110 carrying an array 112 disposed on a rear surface 111b of substrate 110. It will be appreciated though, that more than one array (any of which are the same or different) may be present on rear surface 11b, with or without spacing between such arrays. The one or more arrays 112 cover only a portion of the rear surface 111b, with regions of the rear surface 111b adjacent the opposed sides 113c, 113d and leading end 113a and trailing end 113b of slide 110, not being covered by any array 112. A front surface 111a of the slide 110 does not carry any arrays 112. Each*

*array 112 can be designed for testing against any type of sample, whether a trial sample, reference sample, a combination of them, or a known mixture of biopolymers such as polynucleotides. Substrate 110 may be of any shape, as described above, and any subject array assay apparatus or scanner used with it adapted accordingly.”* This disclosure teaches that more than one array 112 may be present on the rear surface 111b of the substrate 110, and that the plurality of arrays 112 may be the same or different, without specifying or suggesting what those differences are. Nevertheless, this disclosure merely teaches that any differences between the arrays 112 are solely with respect to arrays 112 that are present **on a single substrate 110**. There is no disclosure or suggestion in paragraph 0074 that differences exist between one or more arrays 112 as between **more than one substrate 110**, as in the present claimed invention. It is an improper reading and expansion of the disclosure in Woods to contend that differences exist in the arrays 112 as between two substrates 110. Therefore, Woods is incapable of anticipating the subject matter of amended claim 1 since it fails to disclose the feature of amended claim 1 of “*where the substances are disposed differently in the defined regions on the two carrier media*”.

In response to the prior Official Action dated December 7, 2006 in which claim 1 was rejected for allegedly being anticipated by Woods, the Applicant argued why Woods did not anticipate claim 1. The current Official Action responded to Applicant’s arguments by stating “*in response to applicant’s argument that Woods fails to disclose the feature of the amended claim 1 of ‘where the substances are disposed differently in the defined regions on two different carrier media,’ examiner disagrees. Woods properly reads on applicant’s claim language because Woods discloses in paragraph [0074] having more than carrier media (112, fig. 3) which are the same or different and in paragraph [0075] that the defined regions (116, fig. 3) are the same or different.*” (Official Action, pg. 8). The lack of relevance of the disclosure in paragraph 0074 of Woods to amended

claim 1 is discussed immediately above. The relevant portion of Paragraph 0075 of Woods regarding the response to Applicant's prior arguments regarding Woods noted in the Official Action above discloses that "*array 112 contains multiple spots or features 116 of biopolymers, e.g., in the form of polynucleotides. As mentioned above, all of the features 116 may be different, or some or all could be the same.*" (emphasis added). The emphasized sentence above adds nothing more to the disclosure of paragraph 0074 in that it merely repeats the teaching of Woods in paragraph 0074 that any differences between the arrays 112 are solely with respect to arrays 112 that are present on a single substrate 110. There is no disclosure or suggestion in paragraph 0075 that differences exist between the features 116 of one or more arrays 112 as between more than one substrate 110, as in the present claimed invention. It is an improper reading and expansion of the disclosure in Woods to contend that differences exist in the features 116 of the arrays 112 as between two substrates 110. Therefore, Woods is incapable of anticipating the subject matter of amended claim 1 since it fails to disclose the feature of amended claim 1 of "*where the substances are disposed differently in the defined regions on the two carrier media*".

As a result, it is respectfully submitted that the anticipation rejection of amended claim 1 is moot and should be removed, and that amended claim 1 is in condition for allowance.

#### **Claim 45**

Since claim 45 stands rejected for the same reasons as claim 1, and since claim 45 has been amended similarly to amended claim 1, the arguments above with respect to the patentability of amended claim 1 apply equally well to amended claim 45. As a result, it is respectfully submitted that the anticipation rejection of amended claim 45 is moot and should be removed, and that amended claim 45 is in condition for allowance.

11. Claims 1, 2, 4-5, 7-11 and 45-46 currently stand rejected for allegedly being anticipated by the subject matter disclosed in U.S. Published Application 2003/0027342 to Sheridan (hereinafter “Sheridan”).

### **Claim 1**

The Official Action contends that “*Sheridan discloses a carrier medium (i.e. 106, fig.5) for analyzing an analyte, comprising: a plurality of defined regions (i.e. 504, fig .5), where each of the defined regions has one of a plurality of different substances (i.e. [0030], [0048]); and a code (i.e. 412, fig. 5) that indicates which one of the substances is applied in which one of the defined regions, where the substances are disposed differently in the defined regions on two different carrier media (i.e.[0048]), where the code (i.e. 412, fig. 5) is from the group that comprises a bar code, a numeric code, an alphanumeric code, and an arrangement of the plurality of defined regions on the carrier medium.*” (emphasis added; Official Action, pg. 6).

Sheridan fails to anticipate amended claim 1 because Sheridan fails to disclose the feature of amended claim 1 of “*where the substances are disposed differently in the defined regions on the two carrier media*”. As noted above, the Official Action contends that paragraph 0048 of Sheridan discloses this feature. (Official Action, pg. 6). Sheridan, in paragraph 0048, discloses that “*with reference now to FIG. 5, a biological substrate 106 in accordance with another embodiment of the present invention is illustrated. The biological substrate 106 illustrated in FIG. 5 includes a substrate 404 on which a plurality of discrete samples of a material 504 have been deposited. In particular, the samples of deposited material 504 are arranged in discrete rows and columns. Also shown in FIG. 5 is an identifier 412. As in the other embodiments of biological substrates 106 described herein, the identifier 412 associated with the biological substrate 106 generally serves to*

*uniquely identify the biological substrate 106 so that various information related to the biological substrate 106 can be stored separately from the biological substrate 106. For example, the identifier 412 may relate the biological substrate 106 to information concerning the location and constitution of each of the samples 504 of deposited material on the substrate 404. In addition, the substrate 106 of FIG. 5 includes fiducial marks 304. The fiducial marks 304 of the biological substrate 106 in FIG. 5 comprise a third fiducial level system 216 where, for example, the biological substrate 106 is positioned within a tray 320, and the tray 320 has a second fiducial level system 212 associated therewith, and the platform has a first fiducial level system 208 associated therewith. Alternatively the fiducial marks 304 may comprise a second fiducial level system.”*

This disclosure teaches that the substrate 404 includes a plurality of deposited material samples 504 arranged in rows and columns. The identifier 412 provides information as to the location and constitution of each of the deposited samples 504 on the substrate 404. Thus, this disclosure in Sheridan relates entirely and solely to the composition of a single substrate 404, and makes no mention or suggestion of any features of two or more substrates 404 or any distinction between two or more substrates 404. It follows that this disclosure in Sheridan does not teach or suggest that two substrates 404 can have the samples 504 be formed with different combinations of the deposited materials as between two substrates 404, as in the present claimed invention. It is an improper reading and expansion of this disclosure in Sheridan to contend that differences exist in the samples 504 as between two substrates 404. As a result, Sheridan is incapable of anticipating the subject matter of amended claim 1 since it fails to disclose the feature of amended claim 1 of “*where the substances are disposed differently in the defined regions on the two carrier media*”. Therefore, it is respectfully submitted that the anticipation rejection of amended claim 1 is moot and should be removed, and that amended claim 1 is in condition for allowance.



**Claim 45**

Since claim 45 stands rejected for the same reasons as claim 1, and since claim 45 has been amended similarly to amended claim 1, the arguments above with respect to the patentability of amended claim 1 apply equally well to amended claim 45. As a result, it is respectfully submitted that the anticipation rejection of amended claim 45 is moot and should be removed, and that amended claim 45 is in condition for allowance.


12. Claim 5 currently stands rejected for allegedly being obvious over the combined subject matter in Woods and Zeleny.

It is respectfully submitted that the rejection of claim 5 is moot, since claim 5 depends directly from amended claim 1, which is patentable for at least the reasons set forth above.

For all the foregoing reasons, reconsideration and allowance of claims 1-2, 4-5, 7-11 and 45-46 is respectfully requested.

If a telephone interview could assist in the prosecution of this application, please call the undersigned attorney.

Respectfully submitted,

A handwritten signature in cursive script, reading "Patrick J. O'Shea", is written over a horizontal line.

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